

REMARKS

This is responsive to the Office Action dated February 18, 2003 in which Claim 9 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite because there was no antecedent basis for the recited non-stick coating. Claim 9 is a dependent claim depending directly from Claim 1. Claim 1 has been amended herein to recite a non-stick coating. Therefore, Applicant's respectfully assert that the § 112 rejection of Claim 9 has been overcome because the required antecedent basis is now included in base Claim 1.

With respect to the prior art rejections, claims 1-10 were rejected under 35 U.S.C. § 103 as unpatentable in view of the applicant's earlier reference Cheng U.S. Patent No. 4,708,427 in combination with Welhouse U.S. Patent No. 5,440,973.

Before discussing the specific deficiencies of the cited prior art, Applicant wishes to provide some comments by way of background. As the Examiner will well appreciate from the prior art, there is nothing new about providing articles of cookware with undulations or corrugations, such having been traditionally employed in items such as cast iron griddles or grill pans where the wide corrugations reduce the degree to which the food is contacting the cooking surface so that it does not stick on it. With the advent of non-stick coatings of materials such as PTFE, cookware and in particular products such as fry pans and similar were well able to use planar surfaces without the food sticking on it, and this became standard. More recently, the Applicants recognized the benefit of providing the cooking surface of a non-stick pan with a pattern of corrugations where the corrugations are very closely spaced, normally being no more than 1mm apart to a maximum of 2mm. In the cited Cheng reference the depth of the

troughs in the corrugations is "1mm to 2mm", which is ten times the depth of the corrugations in the present application. Thus, as can be seen for example in Figure 3 of Cheng the corrugations are relatively deep and closely spaced. Cookware including corrugations of this type has been sold by the Applicant for a number of years and has enjoyed commercial success.

As explained in the present specification, however, there are certain drawbacks, generally arising from misuse and inadequate cleaning of such cookware, with food tending to build up and then adhere within the tight and relatively deep corrugations. This problem is particularly enhanced with the recent popularity of hard-anodized aluminum cook ware with which there is a tendency for consumers not to clean such pans as effectively as they might otherwise in the mistaken belief that such pans have properties similar to traditional cast iron pans which one would traditionally wipe with a dry cloth or paper towel.

It has previously been thought that the tight spacing and relatively deep corrugations, as shown in the Cheng patent, were necessary to provide a pan with appropriate wear properties and non-stick properties. But this is now found not to be the case.

What the Applicant has identified is that, surprisingly, a much more open arrangement of corrugations having specific pitch of between 9 and 11 and a specific depth of corrugations between 0.05mm to 0.15mm gives a pan with excellent wear properties and excellent non-stick properties. Claim 1 has been amended herein to correct a typographical error with respect to the upper limit of this range in original claim 1. Support for this limit is found in Applicant's specification at page 4, line 4 and page 7, line 8.

The rejection suggests that the invention is an obvious development of Cheng in view of the teaching of Welhouse. With respect, Applicant asserts that this cannot be correct. Welhouse is deficient in teaching or suggesting many features of the invention, for various reasons. Firstly, Welhouse provides what is referred to as a "textured" surface. It does not provide a surface having a series of corrugations at all. It does not provide anything remotely "concentric". The textured surface in Welhouse is very specifically arranged, comprising a series of low amplitude sinusoidal grooves where each groove is disposed between two adjacent sinusoidal grooves which are 180° out of phase with the adjacent grooves. This results in a pattern having series of elliptical raised lands (15) arranged between the grooves. This very specific structure is provided in order to allow careful control of the proportion of the total surface which is constituted by the "raised portions".

As noted by the Examiner there is no disclosure of the claimed pitch spacings in Welhouse. In any event, it would be unclear to one of ordinary skill what corrugation spacing would be relevant based on the pattern disclosed in Welhouse in that there are no corrugations.

There is no disclosure of preferred spacing between ridge top (15) and groove bottom (17) in the range of 0.005" to 0.012" (which equates to 0.12mm to 0.3mm). The rejection suggests that it would be obvious to modify the ridge top to groove spacing of Cheng in view this disclosure in Welhouse. This cannot be correct, since the specific dimensions of the textured pattern of Welhouse are carefully chosen with respect to that specific textured pattern. One cannot simply choose a number of dimensions from a totally different pattern and apply this to an arrangement of concentric corrugations in any meaningful manner.

The rejection goes on to suggest that the various distances ranges (i.e. the pitch spacings) would be chosen with mere exercise of "routine skill". This also is not correct, since firstly, as explained previously, one cannot in isolation select a particular pitch value and expect it to be effective, without this being related to the other parameters, that is the pattern itself and the pitch to valley distance. Indeed, the Applicant found the critical nature of the inter-relationship of the depth pitch and when developing the invention which is why the claims require both specified pitch and depth. This is quite critical as to how the peaks wear in response to extended contact by cleaning implements and how food releases from the valleys.

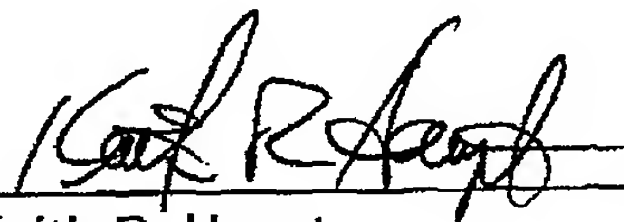
It appears that the rejection is implying that the general conditions of the claimed invention are disclosed in Cheng so the optimal range involves only routine skill. Applicant respectfully disputes this since although Cheng discloses a generally similar structure of corrugations, the Applicant has identified a specific structure in fact going well away from the teaching of Cheng and the other prior art, namely, the closely-spaced deep corrugations of Cheng (and utilized in other forms in many non-stick cookware products of other manufacturers) with a much more open shallow structure with the combinations of pitch spacing and depth as claimed.

As a result of the amendments and remarks given herein, Applicant respectfully asserts that the § 112 and § 103 rejections have been overcome. As a result, Applicant respectfully requests notice of allowance with respect to Claims 1-11 at the Examiner's earliest convenience.

If Examiner feels that any matter in this case requires further attention prior to issuing a Notice of Allowance, he is respectfully asked to telephone the undersigned attorney so the matter may be promptly resolved.

Respectfully submitted,

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